

THE MOTOR AGE

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SELDEN PATENT SUIT BEGUN

THE WINTON MOTOR CARRIAGE COMPANY THE FIRST CONCERN TO BE ATTACKED—INTERVIEWS WITH PEOPLE CONCERNED—MEETING TO FORM A PROTECTIVE ASSOCIATION CALLED

New York, July 16.—The Winton company has been served in the Selden patent suit and Motor Age's exclusive story of the great gasoline vehicle battle soon to be fought in the courts over what is claimed to be a foundation patent has been confirmed even in its foretelling of what would soon happen. One other company only will be sued at present. It is probable that that one will be the Automobile Co. of America, to whom the notice of infringement quoted in The Motor Age's original story was sent.

Last Friday service of the notice to appear and answer in the U. S. Circuit

Court at New York on August 6 next was made upon Messrs. Owen and Chamberlain, the local representatives of the Winton company, whose headquarters are at the Sixty-sixth Street storage and charging station. The suit is brought by the Electric Vehicle Co. and George B. Selden. Frederick R. Betts' law firm is counsel for the complainants and W. B. and G. F. Chamberlin have been retained to appear for the defendants. George F. Chamberlin is the president of the Automobile Club of America and one of the most prominent Winton riders in America, having finished first in the recent

great century run of the Automobile Club of Philadelphia. Mr. Betts has associated with him William A. Redding, counsel for the trust in the great bicycle bottom bracket suit.

Patent Ownership Changed

It must be understood that the original notice of infringement came on behalf of the Columbia & Electric Vehicle Co. and that a deal was consummated on June 21 whereby the Electric Vehicle Co. raised its capital from \$12,000,000 to \$18,000,000 and became the entire owner of the Columbia company instead of merely half owner, as previously.

As The Motor Age readers know, its New York correspondent has made every effort to learn from the Betts law firm the names of the to-be defendants; but has invariably been courteously but positively refused any information whatever.

Plaintiff's Attorney Interviewed

Today, however, he was given an interview with young Mr. Betts and by vigorous questioning got some important information.

"Don't you think that The Motor Age, which has suggested an association to fight our clients, has pretty good nerve to ask us for any favors in the way of information?" asked Mr. Betts, laughingly.

"Yes, but the Winton people have been served and there is no further need of secrecy."

"But have they? I didn't know that they had yet."

"They have; for I've seen the paper that was served. Will you not now tell me the names of those that are to be sued or have been served?"

"We have been instructed to bring suit only against two companies."

"Winton being one, please tell me the name of the other."

"I can't tell you that until I know that service has been made or it might give them warning and frighten them away; but I will tomorrow or Wednesday if I receive notice of service."

"Will there be any further suits?"

Two Concerns to be Sued

"We are instructed only to bring these two. What was determined upon in conference as to others I cannot say."

George H. Day, formerly vice-president

of the Pope Mfg. Co. and now a high official of the Electric Vehicle Co. was next sought.

After acknowledging the purchase of the remaining half of the stock of the Columbia & Electric Vehicle Co. by the Electric Vehicle Co., he retired to his office. In reply to a subsequent inquiry sent in through his secretary as to whether other companies would be sued a loud laugh came from the inner office and the message was brought out: "We have tackled two of them at present and will have to wait and see what the future will bring forth as to the others."

A Winton Official Talks

Treasurer Brown, of the Winton company, was in town on a flying visit and was to return to Cleveland this afternoon. Your correspondent was lucky enough to catch him at the Winton agency at the Sixty-sixth Street storage and charging station before he left.

"The Selden patent is preposterous," said he, "and should never have been granted by the patent office. It will not have a leg to stand upon when it gets in the courts. Of course we shall fight it."

Favors a Protective Association

"I know there has been considerable talk about forming an association, as The Motor Age suggested, and we have had several letters from different concerns on the subject. The suit will doubtless bring matters to a focus and the probable outcome will be a pool of some kind for defending the suits. I understand that notices of infringement were sent to all gasoline vehicle makers whose names could be learned. We have as yet received no notice of a meeting of gasoline vehicle makers and do not know whether any place or date has been fixed for a meeting."

At first blush it really looks as though only two suits would be brought by way of test, just as was done in the case of the bicycle trust against the bicycle makers in the bottom bracket suit.

Buffalo Gasolene Motor Co. Served

New York, July 18, 4:50 p. m.—The attorneys of the Electric Vehicle Co. have just received word that the papers in the Selden patent suit have just been served on the Buffalo Gasolene Motor Co., of

Buffalo. The case will be tried in the United States Circuit court, in the Western District of New York.

A PROTECTIVE ASSOCIATION NECESSARY

Soon after the news of the action that was to be brought under the Selden patent became known—exclusively through the columns of *The Motor Age*—letters were sent from the office of publication to a number of prominent manufacturers of gasoline vehicles, asking their opinions as to the advisability of forming a protective association.

All Favor an Association

A few of the answers received were non-committal in tone, but the very large majority carried the expression that concerted action was not only advisable, but imperative, if the so-called lead car trust were really in earnest in their endeavors to monopolize the business. Some of the less fully informed seemed to labor under the delusion that the matter would end with the notices of infringement.

Electric Company Means Business

How erroneous such ideas were is shown in the foregoing correspondence from the New York offices of *The Motor Age*, and by the fact that the company has just bought many patents covering vehicle construction, as told further on.

Some seemed to prefer to postpone the formation of an association until further developments should have taken place.

However, a sufficient number of the more prominent makers declared themselves as ready and anxious to form an association for protection immediately.

Steps Already Taken

In the meantime, one of the manufacturing firms, realizing the importance of the proposed aggressive litigation, sent out many letters to other firms, preparatory to calling a meeting. The firm, however, decided to delay the matter, and no further steps have been taken.

It is now time for decisive action. The matter is one in which every maker of motor-vehicles employing hydrocarbon engines is vitally interested. Success for one means success for all; defeat for one means defeat and probable ruin for all. The matter is one that demands imme-

diately attention. It is unfair that any one or two firms should be made to stand the brunt of the expensive litigation.

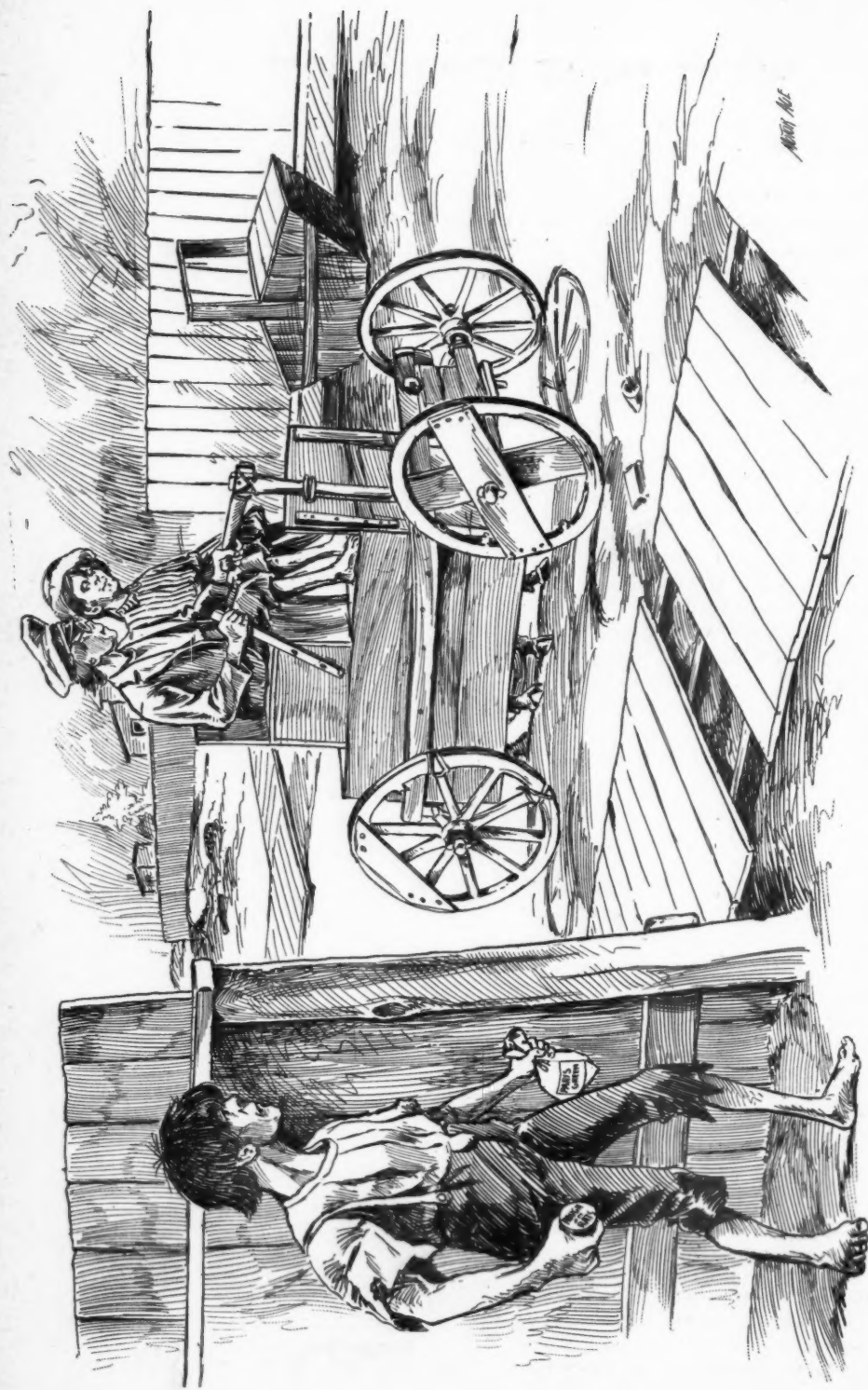
Moreover, it would be to the advantage of the attacking party to offer most attractive terms to the firms against whom it brings the preliminary attack in order to lay the foundation for injunctions against the others. Self-protection is the first law of business and the Winton company, or any other, would be fully justified in agreeing to recognize the validity of the Selden patent and to manufacture under a nominal license, thus laying other gasoline vehicle makers open to attacks in which they would stand less chance than in a preliminary suit—provided the company attacked did not have the united support of its brother companies.

It is probable that, in its next issue, *The Motor Age* will be able to give definite information of the formation of a defensive association.

THE TRUST BUYS ELECTRIC PATENTS

Philadelphia, July 14.—The numerous and well known automobile patents of R. M. Hunter of Philadelphia, about seventy, owned by the General Electric Automobile Co., were purchased on Wednesday last by James W. Cunningham of New York city, presumably in behalf of the Columbia & Electric Vehicle Co., otherwise known as the trust.

Speaking of the value of these patents, Mr. Cunningham stated that "they are worth a quarter of a million dollars if they are worth a cent," and that he came to Philadelphia "prepared to pay \$75,000 cash for their control." It is unfortunate for Philadelphia that outsiders should manage to control the valuable inventions developed by Philadelphians, but capitalists in Philadelphia do not appreciate the development in the electrical fields or they might today control the entire electric railway business of the country, the electric automobile work as well as much of the commercial incandescent lighting systems, as most of these inventions were made in Philadelphia and first offered to Philadelphia capitalists, whose shortsightedness allowed them to slip away from them.



JEALOUS INDIVIDUAL—And so, Beatrice O'Shaunessy, you've shook me to ride with that dude av an Algernon O'Rafferty in his orner-mo-billy, have yer? But you just wait t'ill I've had me interview w'ld t' motive power.

WEEKLY PATENT OFFICE BUDGET

PATENTS ON CONTROLLING LEVERS OF MANY FUNCTIONS FOR GASOLENE VEHICLES, WITH OTHER NOVEL DEVICES, FURNISH AN INTERESTING AND INSTRUCTIVE BUDGET

The last issue of this publication contained George E. Whitney's numerous devices for controlling steam vehicles by means of one lever, and it is appropriate that this week's should show similar devices for gasoline driven vehicles, which it does. Messrs. Clarke, Morgan and Heaslet, of the Autocar Co., of Ardmore, Pa., contribute one neat device, and Charles E. Duryea, the veteran constructor, now of the Duryea Motor Co., of Reading, Pa., contributes another. These two patents also contain claims on other features of motor-vehicle construction.

Robert P. Scott also contributes a patent that is interesting in that it takes up two features of gasoline motor-vehicle construction, which, to the best of the writer's knowledge, have not before been touched upon.

The complete specifications, claims and drawings of any patents will be furnished by the patent office at Washington at five cents each. Persons sending for patents should address their letters "Commissioner of Patents, Washington, D. C.," and should enclose five cents for each copy of each patent desired, and should give the numbers and dates of the patents. Each patent described in *The Motor Age* is preceded by its number and nominal (date which is a little earlier than the actual date). The date of any patent described in earlier issues, in which the dates were not given, can be ascertained by deducting nine days from the rate of the paper in which it was described.

SCOTT'S UNIQUE DEVICE

Letters Patent No. 653,264, dated July 10, 1900, to Robert P. Scott, Cadiz, Ohio; controlling mechanism and flywheel connection; nine claims allowed.

This patent is one in which solutions of two problems embodied in gasoline

vehicle construction are solved in ways that are novel and unique. In the first place the inventor increases the momentum of the fly-wheel of his gasoline engine by gearing it up so as to give it a greater angular velocity than that of the motor shaft, and, consequently, a greater momentum. In the second place he proportions the chain leading from the sprocket wheel on the motor-shaft to another sprocket wheel on a countershaft so that two complete revolutions of the motor-shaft will make one complete revolution of the chain, and then places one or more projections on the chain which are designed to operate the ignition mechanism, or the exhaust or the fuel supply, or two or three of them.

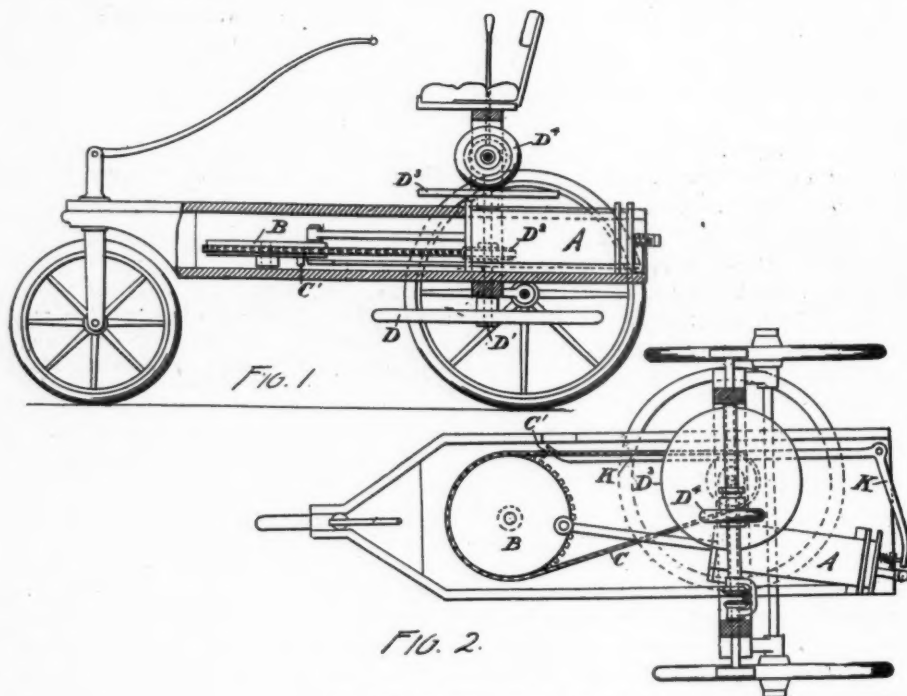
Mr. Scott has apparently employed no attorney in securing his patent, and, as might be expected, the language employed is devoid of technical verbiage. In describing the objects to be accomplished by his invention he says:

"My invention relates to road-cars driven by explosive-engines, and has for its object the production of a car whose weight shall be reduced below the limit hitherto attained and whose working parts shall attain the highest degree of simplicity. To these ends I employ a fly-wheel of very much less weight than those before produced and gain the requisite energy by separating the crank-shaft and the fly-wheel shaft and interposing gearing there-between, so as to speed up the fly-wheel, and thus make up in speed what the fly-wheel has lost in weight. As the energy of the fly-wheel is proportioned to its weight multiplied by the square of its velocity, it will be seen that by doubling the speed I may reduce the weight to one-fourth and still have the same total of energy in the wheel.

"The fly-wheel in my construction is

also mounted on the vehicle to rotate in a horizontal plane. This greatly increases the steadiness of the structure and its freedom from oscillation. A heavy mass rotating at a high velocity in a given plane has a pronounced tendency to remain in such plane and resist any effort to place it in a different plane. My geared-up fly-wheel rotating in a horizontal plane as applied to the road-car is therefore of itself an important feature of

upon the crank-shaft in the opposite direction and there is but little resultant pressure exerted upon the crank-shaft. The entire pressure comes on the part of the frame between the cylinder and the fly-wheel shaft, which, as above stated, are placed in proximity. I may therefore make the machine-frame comparatively light between the cylinder and crank-shaft and merely strengthen it between the cylinder and neighboring fly-wheel



SCOTT'S MOTOR-VEHICLE.

my invention, since it keeps the vehicle steady and tends to prevent oscillations in a vertical direction, but does not interfere with the movements of the vehicle in turning corners and the like.

"I also employ a sprocket-chain to convey motion from a sprocket on the crank-shaft to a sprocket on the fly-wheel shaft and place the fly-wheel shaft near the cylinder. The sprocket chain thus comes nearly parallel to and in the same direction with the pitman-rod. In consequence the thrust of the pitman-rod on the crank-shaft in one direction is counteracted by the pull of the sprocket-chain

shaft. Thus the greatest part of the length of the machine-frame is light and but a small portion of the frame need be heavy. This results in a great saving of weight in the frame, which taken with the reduction in the weight of the fly-wheel, enables me to construct a road-car weighing but a fraction as much as those now in use.

"I attain simplicity of construction by means of the sprocket-chain before referred to, which I make of such length in comparison to the circumference of the sprocket-wheel on the crank-shaft that for a four-cycle engine a double rev-

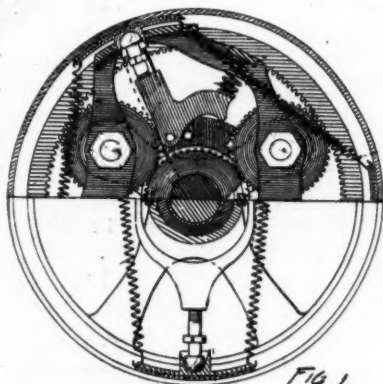
olution of the crank-shaft will cause a single complete revolution of the chain. I may then place one or more projections on the chain and arrange them to set off the igniting devices, the exhaust devices, and, if desired, the gas-inlet devices, which parts I term 'cylinder-operating devices,' at the proper intervals; or I may use one projection to set off or hold open the exhaust device or have the igniting devices or gas-inlet devices worked in other ways well known to the art."

Mr. Scott uses a vehicle with two driving wheels and but one steering wheel. His power is transmitted from a disc

mounted on the piston. The other electrode is stationary. In order to prevent a waste of electricity, this stationary electrode is connected to its circuit wire by way of the exhaust valve, so that when the exhaust valve is opened the circuit is opened, despite the fact that the two electrodes are brought in contact during the return stroke of the piston. Thus any waste from the battery is prevented.

DURYEA'S CONTROLLING DEVICES

Letters Patent No. 653,224, dated July 10, 1900, to Charles E. Duryea, Peoria, Ill., assignor to the Duryea Mfg. Co.,



DURYEA'S TRANSMISSION GEARING.

carried on the fly-wheel shaft to the pneumatic wheel, which is mounted on a sleeve splined on to a cross shaft which is equipped with a differential gear. At each end of this cross shaft is a friction wheel which acts on the pneumatic tire of one of the traction wheels.

In the illustrations, in which Fig. 1 shows a side elevation and Fig. 2 a plain view, A represents the motor, B a sprocket wheel on the crank shaft, C the chain running to the sprocket wheel D2 which actuates the shaft D1, carrying the fly-wheel D and the friction disc D3, which last actuates the pneumatic wheel D4. C1 is the projection on the chain C and actuates the lever K, which, in the illustration is shown as governing the exhaust. Another novel feature covered by this patent is the ignition device. A wipe spark is used and one of the electrodes is

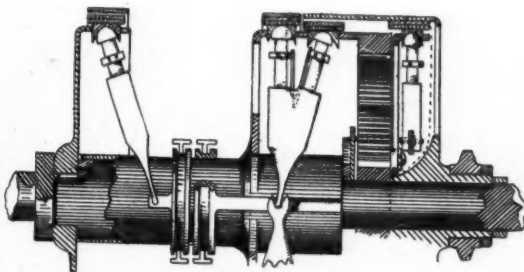


Fig. 2.

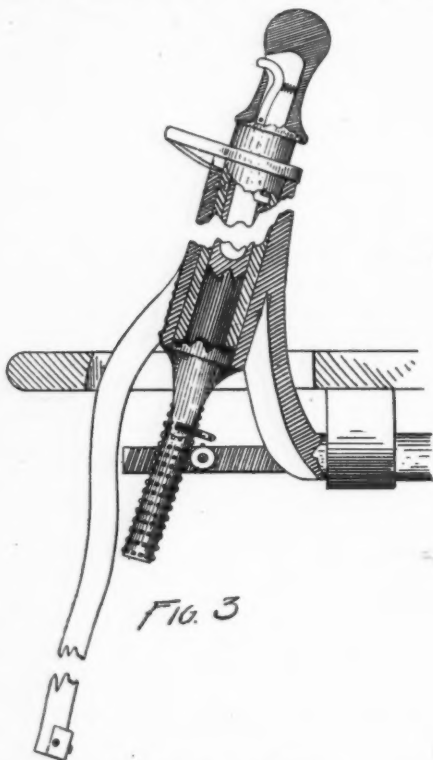
same place; steering gear, controlling lever and speed changing and reversing mechanism for gasolene vehicles; fifteen claims allowed.

In this patent, that veteran constructor of gasolene vehicles, the winner of the earliest American automobile races, covers several points in automobile construction. One is a steering mechanism for a three-wheeled vehicle, in which the single steering wheel is set in the front of the vehicle. The hub is made large and the bearings for the steering are within the hub of the wheel with suitable levers projecting at either side which connect by cords to the steering lever.

The more interesting features, however, are the controlling lever and the speed changing and reversing mechanism.

Fig. 1 shows a sectional view of the speed changing and reversing device,

while Fig. 2 shows a side elevation of the same. In this device, there is a pinion mounted on the motor-shaft. In mesh with this pinion are three idler pinions which are carried on a spider by means of studs, and meshing with these three idler pinions is an internally toothed gear wheel. The spider which carries the three idlers is mounted on a sleeve which surrounds the motor-shaft. The internally toothed wheel is mounted on a



Duryea's Controlling Lever.

drum which is carried by a sleeve also surrounding the motor-shaft, but outside the one carrying the spider. There is another drum surrounding the nest of gears which is carried on another sleeve surrounding the motor-shaft. On this drum is rigidly fixed a sprocket wheel by means of which the vehicle is driven. There are two other drums, which, however, are permanently rigid in relation to the entire vehicle. By means of a series of friction clutches either the spider carrying the idlers or the internally toothed wheel, or both, may be held rigid in relation to

the drum carrying the sprocket wheel and either the internally toothed wheel or the spider carrying the idlers may be held rigid in relation to stationary drums. By one arrangement of the clutches the spider carrying the idlers is held rigidly in relation to the sprocket drum and the internally toothed wheel is held rigidly in relation to one of the stationary drums with the result that a slow forward motion is given to the vehicle, the idlers, together with their spider, and the sprocket drum revolving in the same direction as the motor-shaft but at a slower speed. By another arrangement of the clutches, both the spider carrying the idlers and the internally toothed wheel are held rigid in relation to the sprocket drum with the result that all revolve as if part of the motor shaft and the vehicle is given a rapid forward speed. By still another arrangement, the internally toothed wheel is held rigid in relation to the sprocket drum while the spider carrying the idlers is held rigid in relation to one of the stationary drums, with the result that the internally toothed wheel is given a rotation the reverse of that of the motor-shaft and conveys similar motion to the sprocket drum and the vehicle is driven at a slow speed backward. If the internally toothed wheel is held rigid—as it may be—to one of the stationary drums and the spider carrying the idlers is not held at all, the spiders will merely run loose and no motion will be imparted to the vehicle, although the engine be in motion.

Thus the vehicle is given two forward and one backward speeds or the engine may be allowed to run wild.

In the controlling handle, which is shown in Fig. 3, Mr. Duryea has embodied a novel construction. The handle is susceptible of being given either a vertical or a rotary motion. The lower end of this device is toothed, as shown in the illustration, to engage with both a rack and a pinion. Vertical motion actuates the pinion without having any effect on the rack, while rotary motion actuates the rack but not the pinion. To prevent unintentional motion of this governing device a retaining finger is uti-

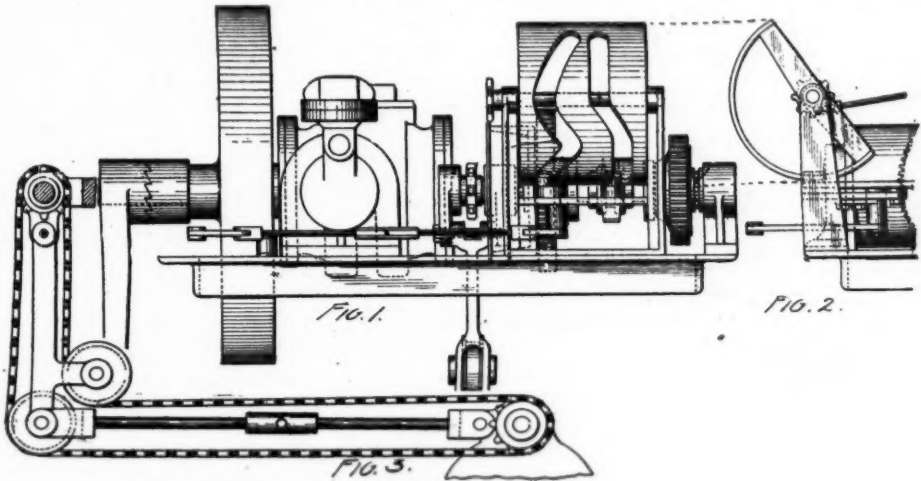
lized, being held in place by a spring unless released by the driver. A pointer is also fixed to this lever by means of which the reversing mechanism is operated.

THE AUTOCAR CO.'S DEVICES

Letters Patent No. 653,501 to Louis S. Clarke and William Morgan, Pittsburg, Pa., and James G. Heaslet, Allegheny, Pa., assignors by mesne assignments to the Autocar Co., of Pennsylvania; controlling devices for gasoline vehicles and chain, or belt, adjusting device; twenty claims allowed.

The controlling mechanism provides

tor of the four-cycle type is employed. On the motor-shaft are mounted two gear wheels of different sizes which mesh with two other gear wheels of inversely corresponding sizes to produce high or low speed forward. These latter two gear wheels are loosely mounted on a countershaft and run free until one or the other is held to the countershaft by means of one or two friction clutches, which are both operated by one lever arm. This lever arm is provided with a stud which engages one of two slots in a semi-cylindrical drum, of which an end elevation is shown in Fig. 1 and a side elevation in Fig. 2. When neither of the



AUTOCAR CO.'S CONTROLLING DEVICES AND CHAIN ADJUSTMENT.

means whereby either the ignition point or the supply of fuel, or both, can be governed by the same lever that controls the high or low speed gear between the motor-shaft and the countershaft and the reversing gear. It not only does this, but it is so arranged that there is correct progression between the speed—and consequent efficiency—of the motor and of the gearing.

The entire motor mechanism, together with the speed varying mechanism and controlling devices, are all mounted on a framework of angle iron, in such a manner that all can be lifted off the vehicle together, for the purposes of examination and repair.

A two-cylinder, balanced gasoline mo-

tor of the four-cycle type is employed. On the motor-shaft are mounted two gear wheels of different sizes which mesh with two other gear wheels of inversely corresponding sizes to produce high or low speed forward. These latter two gear wheels are loosely mounted on a countershaft and run free until one or the other is held to the countershaft by means of one or two friction clutches, which are both operated by one lever arm. This lever arm is provided with a stud which engages one of two slots in a semi-cylindrical drum, of which an end elevation is shown in Fig. 1 and a side elevation in Fig. 2. When neither of the

clutches is in engagement, the engine is allowed to run free. This semi-cylindrical drum is operated from the seat by a controlling lever through the medium of a chain and sprocket wheels. The sprocket wheel on the shaft carrying the semi-cylindrical drum is connected, by means of a pin, to a rod having a slotted end, as shown in Fig. 2. When the drum is revolved by this sprocket wheel to give either of the forward speeds, the pin on the sprocket wheel merely slides in the slot in the end of the rod. When, however, the controlling lever is thrown away back and the sprocket wheel pin and drum are revolved sufficiently, both speed governing clutches being out of mesh, the pin

reaches the end of the slot in the rod and the rod is drawn in such a manner as to bring an idler friction wheel in contact with two friction drums, one on the motor-shaft and one on the countershaft. This gives the vehicle a backward motion.

But the semi-cylindrical drum which controls the two forward speeds through the right hand of the two slots shown in Fig. 1, also governs a lever which is provided with a stud to fit in the left hand slot. This lever, with its connections, controls both the sparking device and the valve by which the supply of fuel is regulated—although it may be arranged to control only one of these functions if desired.

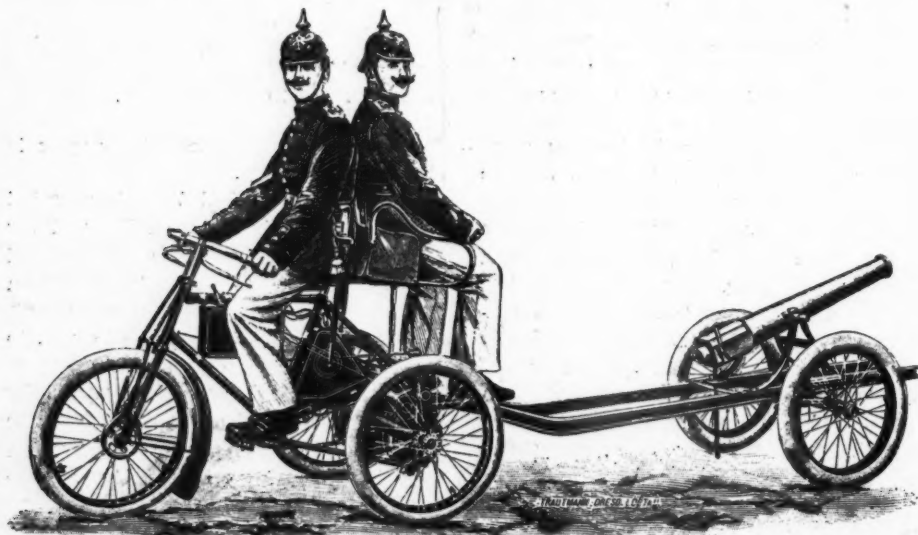
The action of this semi-cylindrical drum is very similar to the action of the cam-drum of an ordinary turret lathe, from which—at a guess—the inventors may have derived their idea. It will be seen that on the shape of the slots in the drum depends the direction of the levers, which, in turn, control the speed of the engine and the amount of reduction in speed between the motor-shaft and its countershaft. The vehicle may be started at a slow speed of both engine and transmission, gradually increase the speed of the engine until it has reached its maxi-

mum and then reduce the speed of the engine as the higher gearing is thrown into mesh, and, finally, bring the speed of the motor to the highest point again.

In addition to this governing mechanism, and inventors have covered a device for maintaining the tension of the chain (or it may be a belt) between the sprocket wheel on the countershaft and one on the differential gear box of the shaft of the traction wheels. The manner of doing this is shown in Fig. 3, an inspection of which will reveal the manner in which the tension of the chain is adjusted by means of a turn buckle, and by which the spring motion of the body of the vehicle in reference to the running gear is compensated for by the jointed rods which carry the idlers, over which the driving chain runs.

HOW TO SAVE MONEY

Many a man has wasted time and money in perfecting devices that have already been perfected, only to learn, when applying for a patent, that he has been anticipated. This can be avoided, as far as motor-vehicles are concerned, by having a copy of Allen's Digest of Automobile Patents. See display advertisement on another page.



GERMAN AUTOMOBILE FIELD GUN.

—Reproduced from *Der Motorwagen* of Berlin.

WHAT SKINNER SAW IN FRANCE

AN INTERVIEW WITH THE AMERICAN CHAUFFEUR WHO RECENTLY RETURNED FROM PARIS, REGARDING THE LAWS AGAINST FAST SPEED AND HOW THEY ARE EVADED, AND HIS OPINIONS OF THE GORDON-BENNETT CUP RACE

Boston, July 15.—Kenneth A. Skinner, of this city, who represents one of the leading French motor houses, returned yesterday from a month's business and pleasure trip abroad. Mr. Skinner while abroad took in all of the big races, both paced and sprints, and talks entertainedly of both. His foreign experiences are very unique and interesting, and especially as regards the law concerning the racing of automobiles and the various methods by which it is evaded. Said Mr. Skinner:

Skinner Talks

"The condition of affairs in France is very bad. As you are perhaps aware, a dampener upon automobile racing has been put upon the sport. The laws are strict and are too rigidly enforced and then again in certain quarters not enforced at all, and that is where the rub comes in. It is a case of 'pull' the same as it is in this country. If you 'stand in' why you are not jailed; if you don't 'stand in' you are. The speed limit is about twelve miles an hour, but nobody pays any attention to it. Why, almost at any time of day along the Bois de Bologne you can see them going at twice that speed and even faster.

High Powered Vehicles

"You wouldn't mind that rate so much if it were not for the fact that some of these racing cars are fitted up with some horribly high powered motors, ranging from twelve to thirty-four horsepower, and are capable of speeds up to fifty miles an hour. On some of the stretches outside of the town those cars let go at full speed, and it is something terrible.

"This is the reason why laws are necessary, but the speed limit of twelve miles is not effective for the simple reason that the motorist and the agencies for motors have been seen and 'fixed' the officers.

"One day while in a hurry I put my tricycle up to about twenty-five miles an hour on the Bois and was immediately nailed by an officer and told to stop. I eased up quickly and when he reached was going well within the limit. I had to stop, for the gates of Paris were ahead of me and blockades are frequent. When they ranged up against me I had dreams of arrest and a cell, for an officer's word always goes against a prisoner over there. To evade arrest I told them I hired the machine, and when they asked me of whom I gave them the name and address of the man at whose store I stored the machine.

A Narrow Escape

"They finally let me go after taking my name and address, warning me that it would go hard with me if I had lied. I lost no time in getting back to the store, where I put the proprietor 'on,' and it was lucky I did, for they arrived a short time afterwards but went away satisfied, for my friend was one of those who had a 'pull.'

"At first automobilists were fined for high speeding. When this didn't stop them they jailed them and many notables had to do a low salaried 'turn' in jail over night for running their motors too fast. It made no difference, men of title, family and wealth—they all had to do their turn. Albert Bostwick, of the American Automobile Club, is one who spent twenty-four hours in jail for such an offense.

Saw the Gordon-Bennett Cup Race

"I was an interested spectator and follower of the international cup race, having had to leave Paris to see it. We traveled about thirty miles on our tricycles and stopped at the road side for accidents. It was a clear morning and we could see ahead for about two miles. We first saw a big cloud of dust, out of which

evolved Giradot, followed a little later by Charron, and with him was Jenatzy, a close third. Seated beside Charron was Fournier, who made such a furore in this country. Fournier had to work hard for nine miles at the pump, which had broken loose, and both were so totally done up that at the finish they could hardly stand up or walk to their rooms.

Surprised at Winton's Speed

"I had no expectation that Alexander Winton, the American, would get the speed from his racing carriage that he did. He had a twenty-four horsepower engine, which made an awful noise until it met with an accident. The French chauffeurs wondered how he could steer his carriage with a rod instead of a wheel, for his carriage wobbled from side to side. That was what caused it to smash in going around a corner, as it is impossible to drive such a high powered motor carriage without a wheel.

"The route for the cup race was from Paris to Lyons, and one can judge of the speed made when I tell you that the distance was covered—accidents and all delays counted in—in less than the time of the fastest express train between the two cities."

Elkes the Best Pace Follower in Europe

It is Mr. Skinner's opinion that Harry Elkes is not only the best paced racing man in Europe, but in a class all by himself. He thinks Taylor, the European hour champion, cannot begin to compare

with him and that Elkes' mileage of sixty kilometers (thirty-eight miles) inside the hour in his last race with Taylor shows the American's superiority.

Against Heavy Odds

In the last race, in which Elkes was beaten, it was agreed to ride behind tandems only. But at the last moment Taylor, Bauge, Bouhours, Linton, Ross and Coutenant came out with tricycles. Taylor, Linton and Ross consented to use tandems, but the rest would not, so Elkes started with his tandem against the others with their huge wind-shield tricycles. In spite of this handicap he finished second.

Bauge, the winner, had a tricycle which was fitted with two motors, a tank three feet high and two wide, and seated on all this was a giant for an operator. It was as big as a locomotive, and yet for twenty-five miles Elkes stood Bauge off and refused to let him pass. It was a marvelous ride and clearly showed all present that Elkes was the king.

"Pop" Elkes, Harry's father, was clearly "sore" and, after the race, offered to make any rider present a start of a mile in the hour on even terms and then bet that Harry could beat him, but there were no takers.

"When I came away," said Mr. Skinner, "Elkes was having a tricycle fitted with all kinds of tanks to shut the wind off and will have a shield that will beat them all."

FROM THE FOUR WINDS

TO YOSEMITE BY AUTOMOBILE

The entrance of an automobile into the Yosemite valley may be regarded as great a curiosity as would be the advent of a locomotive there, says the San Francisco Chronicle. Two men from Los Angeles have had the courage to try the experiment and it has been in every sense a complete success. The distance from Raymond to the valley via Wawona is seventy miles, and an elevation of 5,000

feet must be overcome. At some portions of the road there is a grade of nearly twenty per cent. The better part of two days is consumed by the regular stages on the trip. This automobile, which was driven by steam generated by the use of gasoline as fuel, made the entire distance in eight hours and eighteen minutes actual running time, and with a total consumption of only eight gallons of liquid. Grades which the four-horse

stages cannot travel at a gait exceeding three miles an hour were covered by the automobile at eight miles an hour, with considerable reserve power left.

With one exception the occupants of the novel vehicle had no difficulty with timid horses on the way. Near the little mining town of Grub Gulch a four-horse lumber team shied at the unusual object, but the driver is said to have been more to blame than the animals. All other teams encountered on the road and after reaching the valley were quite unconcerned. Horses will undoubtedly accommodate themselves to these vehicles as readily as they did to the cable and electric cars.

Respecting the use of these horseless carriages, San Francisco is far behind the principal eastern cities. In Chicago and New York the automobile is a common object on the streets. Perhaps the cost of these vehicles is a bar to their more general introduction here, until they shall have passed through the experimental stage; but the achievements of the one that made the trip from Raymond to the Yosemite so easily is sure to raise automobiles in public favor. It is surmised that they may take the place of the stages which now haul tourists wearily to and from the valley. Cutting down the time of the trip to a little more than eight hours is next to making an all-rail journey of it, which is the boon most Yosemite tourists are now coveting.

ACROSS OHIO IN FAST TIME

Cleveland, July 16.—A. S. Ingalls, a leading member of the Cleveland Automobile Club, and a son of President Ingalls of the Big Four railway, made a flying trip across the state of Ohio Friday and Saturday, establishing a record which will probably stand for some time to come. He left Cleveland early Friday morning and reached Springfield late in the afternoon. He stayed there over night and made the remaining eighty miles into Cincinnati Saturday morning, reaching that city by noon. The distance covered was something over 250 miles and his actual running time was less than twenty hours. Mr. Ingalls owns a Win-

ton gasoline machine and this ride adds another remarkable record to the long string of fast runs made on this vehicle.

AUTOS IN FRENCH ARMY MANEUVERS

Paris, July 4.—Important tests of automobiles will be made in connection with the maneuvers of the French army, which take place between September 10 and 20. Minister Gillifet has already stated to the Chamber the necessity of adopting motor-vehicles and the officers of the general staff have given the matter careful study.

In '98 trials were made under the direction of one of the best known French drivers, Journu, who was the first to suggest the motor-vehicle for army use.

To Commander Renard was allotted the task of having constructed a vehicle which should be suitable for use by the army. He made but a poor showing, and now it is reported that instead of attempting to adopt a vehicle which shall be exclusively a vehicle for the army, the various firms in the industry will be given opportunities to demonstrate the utilities of their various makes.

At the approaching maneuvers, under General Jamont, there will be tested four steam vehicles and four gasoline, as means of transport. Depots containing gasoline and other necessary supplies will be established.

As in former years, the staff will have many motor-vehicles at their disposal for the purpose of being able to move rapidly to various widely separated points.

On June 27 was held a meeting of the Moto Club of France, at which Serpollet, the inventor of the steam generator which bears his name, was elected president. Among those who were elected to active membership were Archdeacon, Scotte and Darracq, all prominent manufacturers of automobiles.

BUFFALO AUTO CLUB RUN

Buffalo, July 15.—The first run of the Buffalo Automobile Club was made yesterday afternoon. Eight or nine vehicles of various types lined up in front of the Gerese Hotel shortly after 3 o'clock and about 3:30 they started on the trip which

had been planned. First the drivers went to the foot of Porter Avenue, where a visit was made to the Buffalo Yacht Club's home. Light refreshments were served there. Leaving the club house the vehicles were guided through The Front to Massachusetts Avenue, thence to Richmond Avenue through the Parkway and the Park to the home of the Otowega Club.

The run ended at the Otowega Club. Among the men who took part in it were Dr. V. Mott Pierce, J. L. Langdon, I. J. Morse, J. H. Metcalf, Charles R. Huntley and Bert L. Jones. It is expected that a much larger number of persons will participate in the next run, the date of which has not yet been determined.

ANOTHER AUSTRALIAN TRIAL

Sydney, N. S. W., June 20.—W. J. C. Elliott, the proprietor of the Sydney Austral Cycle Agency, has announced his intention to run his recently landed voiturette from Goulburn to Sydney, a distance of something like 150 miles, as a test. The roads on the route are not too good, although it is down hill nearly all the way. It would have been a better test to run the car from Sydney to Goulburn, as it would then have had plenty of hill climbing to do. As soon as the rain stops and the roads are in anything like a rideable condition, the ride will be undertaken. The car is capable of seating four persons comfortably and five at a pinch, and it is to carry a full list of passengers on the occasion of the test. Mr. Elliott makes daily trips around Sydney in the car and the vehicle is attracting much attention. On the occasion of the Goulburn test Mr. O'Brien, on the Austral Cycle Agency's motor tricycle, will accompany the larger vehicle.

NOW ALLOWED IN MUNICH

The Bavarian Government, according to a statement made by Consul Worman, has just set aside the city ordinance preventing the use of automobiles on the streets of Munich. This opens up one of the best German cities for American manufacturers of horseless vehicles of every

sort, and wide-awake agents should be promptly sent to this field, so promising because of the large class of wealthy residents. Munich is the third largest city in the German Empire. The streets are well paved, bicycles are popular, and horses dear.

NOTES FROM GERMANY

Berlin, July 2.—The automobile exhibition at Frankfort-on-the-Maine will be opened on July 14, Prince Friedrich Carl of Hesse, a brother-in-law of the German Emperor, having graciously undertaken to perform this ceremony, thereby rendering it a fashionable necessity for the Frankfort grande monde to visit the show, and the better classes of Frankfort society are very well endowed with the good things of this earth. An automobile flower corso has been arranged for the 22nd inst.; the Frankfort A. C. has entered twenty-three vehicles for competition. The head magistrate of Meissen, in the kingdom of Saxony, published an edict on June 26 forbidding the use of motor vehicles in the prefectship of Meissen. Transgressions of this Solomon-like regulation will be punished by a fine up to sixty marks or ten days' imprisonment. What a good time unfortunate motorists wishing to pass through the district ruled over by the anti-automobilistic "Amtshauptmann" will have.

MODERN MOTHER GOOSE

I had a little auto,
'Twas in the latest style;
I lent it to a lady,
To ride a little while.
She bumped it,
She jarred it,
She rode it in the mire;
I wouldn't lend my auto now
For twenty ladies' hire!

—New York World.

The Denver "milk trust" declares that it will use automobiles to deliver the lacteal fluid as soon as they can be obtained. It is expected that eight motor wagons, with a man and boy to each, will replace one hundred of the old-fashioned wagons with one man each.

NEWS OF THE MOTOR INDUSTRY

A NEW WAY TO SELL STOCK

The American Mfg. Co., "organized under charter by special act of the legislature of New Hampshire," according to the printed matter of the company, have a scheme, new to the automobile industry, for disposing of stock. In their printed matter they say:

The American Mfg. Co. is organized under a charter obtained by special act of the New Hampshire legislature, and its business is to manufacture and deal in steam motor vehicles, which will be known as the Concord motor carriages. Its factory is located at Penacook, a suburb of Concord, N. H., where it has an abundant supply of water power, large buildings and grounds sufficient for the employment of hundreds of workmen, and has facilities for carrying on all branches of business necessary for the production of motor carriages in large numbers.

To enable the company to equip the factory with the machinery and workmen sufficient to turn out the finished carriages in the large numbers that it is designed to do, the company offers for sale, through its selling agents, the Concord Motor Carriage Co., of Boston, a limited amount of its capital stock on the following plan:

The stock will be offered in blocks of ten shares each, at one hundred (\$100) dollars per share, making one thousand (\$1,000) dollars for the ten shares, and to each purchaser of ten shares there will be given a full-paid accepted order on the American Mfg. Co. for a perfect motor carriage, to be delivered to the holder of the order when the carriage numbered to correspond with the order is reached.

The carriages will be numbered in successive order as they are completed in the factory. We have adopted this plan of selling our stock in preference to selling it through the promoters or brokers as we have found that if our stock was sold through these agencies it would take nearly or quite one-half the money paid by the purchaser of the stock to satisfy the claims of these agents. As the selling price of this carriage in the market is seven hundred and fifty (\$750) dollars, each stockholder receives what practically amounts to a dividend of seventy-five percent on the ten shares of stock in the first year.

It actually costs the company nothing to give to each purchaser of ten shares of its stock a perfect motor carriage, for it can and does build this carriage with the money that would go to the broker or promoter if the stock were sold through them in the regular manner.

We propose to give 500 carriages in this manner; at the end of that time we will have our factory turning out from 100 to 200 carriages per month, and a large surplus of cash and a liberal reserve of stock in the treasury.

We shall have the advertising benefit of 500 carriages out in the market, and the whole situation will be such as to insure the earning of large dividends on the capital stock of the company.

The factory is now in operation actually making carriages, and will begin to make deliveries on or before the first of September, 1900. In the meantime we shall try to keep customers fully informed as to the progress being made, and shall be pleased to have customers or others visit our factory and see for themselves what our facilities are for turning out the very best motor carriages in the market and in numbers to meet the great demand that their merits will warrant.

We have a Concord motor carriage in daily operation in Boston, and we will be pleased to show its operation to any one who will call at our office.

Parties looking for a safe and profitable investment, and especially those who are desirous of possessing a first-class motor carriage, will do well to give this their attention. Every facility will be given for the fullest investigation of our inventions, our patents, to examine and ride in our carriage, and to become thoroughly familiar with our work and our prospects.

The authorized stock of this company is \$2,000,000. The 500 desired subscriptions of \$1,000 each would absorb \$500,000, or one-fourth of this stock. What disposition has been or will be made of the other three-fourths, the circulars of the company strangely neglect to say, although prospective purchasers would undoubtedly be interested to know. It is safe to assume that it will not be sold for its face value in good hard cash.

The new industry certainly affords

many opportunities for all sorts of schemes.

SPERRY'S CHARGING APPARATUS

The Motor Age is now at liberty to state that the automobile charging apparatus for use with alternating current, described and illustrated in the July 5 issue, is the invention of Prof. Elmer E. Sperry, the well-known electrical expert who is at the head of the automobile department of the Cleveland Machine Screw Co., Cleveland. The rectifier—not "receiver," as a typographical error made it read in the issue mentioned—will be manufactured in quantities by the Cleveland Machine Screw Co. and will be furnished with its electric vehicles. Whether or not it will be sold independent of the vehicles has not yet been determined. The great advantages claimed for this device are its lightness, weighing less than forty pounds, its simplicity and the comparatively low price at which it can be produced, placing it within the reach of every electric vehicle owner. This announcement comes rather prematurely, as the company is not yet prepared to furnish the device in quantities; in fact, it is still in the nature of an experiment, although several months of continuous service have shown it capable of all that has been claimed for it.

FIRST VERMONT VEHICLE

What may be the first horseless carriage of Vermont manufacture will be completed and in use some time this week, says the Montpelier (Vt.) Argus. The automobile is the property of Charles T. Ranlet, of St. Johnsbury, and is a production of the Ranlet Automobile Co. For some time Mr. Ranlet has made a close study of the subject of horseless vehicles and during the past year has visited every cycle and automobile show and nearly every factory in the east and middle west. As a result he has constructed a machine which is designed especially for rough, hilly roads. The parts have been manufactured in various places and the machine is now being set up. The carriage is in the form of a trap and the

motive power consists of a five-horsepower gasoline engine. In its general make-up this automobile is somewhat different from the usual American type and while in some ways it is wholly unlike the French carriage, yet in all essential features Mr. Ranlet has followed the foreign idea closely. The carriage will weigh about 1,000 pounds and if it proves a success the same power and method of transmission can be applied to any kind or style of vehicle.

THE KEYSTONE AUTOCYCLE

The Keystone Motor Co. made their entry into the motor-vehicle field a few weeks ago by sending a few of the leading papers in the automobile industry their advertisement. The company asked for no preliminary announcement. So quietly had their work been pursued that the first intimation that any one in the trade had of the existence of the company was their application for space in the advertising columns of the different papers.

This course was so unusual that a man was dispatched to Philadelphia for further information and, to his astonishment, he found the factory well developed in the industry.

The Keystone company have been making a large stock of their quadricycles which they are now selling under the registered name of "Autocycle." They also have a quantity of their two and five horsepower motors completed and in the course of construction.

The factory comprises three large buildings in the heart of Philadelphia, which occupy nearly half a square block. Several elevators furnish adequate facilities for moving their product from one floor to another.

The machine shop is equipped with modern tools and is laid out after the latest and most approved methods. A complete set of jigs and special tools have been made for the work. The well arranged and complete tool room is a feature of the shop.

The forge and blacksmith shops are contained in a separate building.

One of the most interesting things to

be seen about the factory is the method of testing engines. All parts are made in the machine shop, and, when finished, are sent up stairs to the assembling room, where there is a force of men to put the engines together. When the engines are assembled, they are again sent up stairs, where they are put under a rigorous test to determine whether or not they reach the high standard set by the

Autocycle shows two passengers in the vehicle. The little machine is very strong and exceedingly powerful, can negotiate any hill and is capable, on level ground, of covering twenty miles in the hour.

There is no trouble in starting. By simply pressing a small lever the vehicle starts promptly from a standstill.

The construction is especially adapted to country roads. A compensating device,



THE KEYSTONE AUTOCYCLE.

company. Each engine is run for many hours and a complete record of the performances of each is kept on file.

The Keystone company have combined, both in their motors and in their quadricycles, many original and apparently valuable features. The workmanship appeared to be excellent, the material used is the best that can be obtained and the designs are practical and entirely new.

The accompanying illustration of the

to permit the vehicle to adapt itself to the inequalities of the roads, is a valuable feature. Another noticeable improvement is the large seat permitting the two passengers to be seated side by side, unlike the more commonly seen quadricycles.

The company are to be congratulated on entering the new field in so business-like a manner, and, from what was seen of their facilities, their factory and bus-

iness methods and their product, it is safe to predict an unusually brilliant future for them.

SIPE & SIGLER BRANCHING OUT

Cleveland, July 16.—Sipe & Sigler, the well-known storage battery manufacturers, have hit upon a plan for increasing their facilities and at the same time decreasing the cost of producing their goods. Heretofore they have been obliged to purchase all their hard rubber parts, such as separators and gaskets, from the American Hard Rubber Co., the hard rubber trust. Some months ago they commenced experimenting in the production of their own hard rubber goods with such success that they have now equipped their own rubber plant. The department is being conducted as a separate institution in charge of P. E. Reubenstrong, formerly with the Goodrich Hard Rubber Co. of Akron. The plant is located at the corner of Superior Street and the Cleveland & Pittsburg R. R. tracks, and it is equipped with the latest type of machinery for this work. At present they are turning out about 300 finished separators per day and this capacity will be increased in the near future.

The growth of the automobile storage battery business of this company may almost be considered a pulse for the development of the electric carriage industry; since a very large portion of the experimenters and manufacturers of this type of vehicle are using Sipe & Sigler's batteries, with the result that the demand is increasing so rapidly that they find it impossible to take care of all orders and inquiries. A noteworthy contract which was closed not long ago was for a large number of equipments of batteries for the Olds Motor Works of Detroit, which is preparing to announce a line of electric vehicles.

TIRE SUIT BEGUN

Cleveland, July 16.—Two suits have been brought against Akron tire manufacturers by the Single Tube Automobile & Bicycle Tire Co., of Belleville, N. J., for alleged infringement of the well known

agreement covering the sale of tires made under the Tillinghast single tube patents.

The first was brought Saturday against the Goodyear Tire & Rubber Co. In its petition the plaintiff company states that it controls the Tillinghast patent on pneumatic tires and that prior to January 1st last made contracts with various tire manufacturers, among them the defendant, allowing them to make and sell the tires upon the payment of a five percent royalty. The minimum prices for tires was to be \$4.25 per pair for guaranteed tires and \$2.75 for unguaranteed.

The petition states that the above prices were maintained except upon the contracts that had been made before the agreement went into effect on January 1. It is alleged that the Akron company made contracts to furnish tires at \$1.40 to \$2.25 per pair, representing that the contracts had been made prior to January 1. According to the petition, the defendant company sold from 100,000 to 200,000 pairs of tires from January 1 to April 15, upon which royalties should be paid, but that the defendant allowed for royalties on only 732½ pairs of tires during that time. The New Jersey company claims that also \$20,000 is due in royalties. Plaintiff asks that the defendant be restrained from selling tires at less than the price agreed upon except under bona fide contracts made before January 1. Judge Ricks, of the United States circuit court, granted a temporary injunction.

A similar suit was brought against the India Rubber Co.

GERMAN MAIL COACHES

Consul-General Guenther writes from Frankfort, May 25, 1900:

The "Automobile Co. of Speyer," organized last year with a capital of \$24,000, has five automobiles in use, representing an investment of about \$14,500. They are propelled by benzine motors, in front of the vehicles, of ten horsepower, and were built by the Daimler Automobile Co., of Cannstadt. Each coach is capable of carrying twenty-eight passengers, and the company has a contract

with the postoffice department to carry the mails, which include packages, etc., usually sent by express in the United States, to Dudenhofen, Geinsheim, Honhofen, Harthausen, Mechtersheim, Otterstadt, and Waldsee—two to ten miles away. In the five months since starting more than 40,000 passengers have been carried.

REGARDING ELECTRIC PATENT SUIT

Editor The Motor Age:—

I notice on page 26 of your issue of July 12 that the Thomson-Houston Electric Co. had brought a suit against the Lorraine Steel Co. under one of my patents. Your statements are, however, a little confusing. The facts are, that the suit was brought by the Thomson-Houston Electric Co. in behalf of the General Electric Co. on the electric truck set out in my patent, No. 638,966, dated December 12, 1899, and which is in use on almost every car in the United States. The General Electric Co. controls this patent exclusively for trolley work. I assigned the patent for all automobile work to the General Electric Automobile Co., which subsequently assigned it, together with some seventy other of my patents, to Edward W. Levis of Philadelphia, and by whom it was subsequently sold, subject to the right of the General Electric Co., to Mr. James W. Cunningham of New York city in behalf of a prominent automobile company. This patent was in interference with Van Depoele, Sprague, Brill, Short, Priest, Heywood and others, and was fourteen years tied up in the Patent Office in litigation. In every case and every decision priority was in my favor, so that the patent is likely to be a very important one in the litigation of the General Electric. Very truly,

R. M. HUNTER.

Philadelphia, July 14.

NON-SLIPPING AUTO TIRE

New York, July 16.—Some interesting tests were made by the Locomobile people at Bridgeport the other day of a non-slipping tire, the invention of Dr. K. Arvid Enlind. The rear wheels of the Lo-

comobile were fitted with a pair of these tires and a thirty-foot incline of smooth ice blocks was built with a thirty-six percent incline, up which the non-slipping-tire fitted vehicle mounted with ease. Patent for this invention was granted only June 24. The Motor Age man was shown a photograph of the vehicle ascending the incline during the test. Some further tests on slippery macadams and inclines will shortly be made in this city.

The Enlind non-slipping tires are the same as ordinary tires except that between the layers of fabric is inserted a plate. In a part of that plate is a threaded socket, which extends from the periphery of the tire to the plate. Into this threaded socket spurs of steel are inserted from one-eighth of an inch to one inch in length. The latter spurs are used in riding on ice, quarter-inch spuds being used for slippery macadam and road riding. When the spurs are not in use ordinary screws to fit the aperture are inserted to keep out the dirt.

LOCO DELIVERS FOR U. S. CUSTOMS

New York, July 16.—The New York Custom House has in use a locodelivery for the purpose of transferring invoices from the custom house to the public stores. This is one of the first of the delivery wagons now being built experimentally by the Locomobile Co. of America at its Bridgeport factory, with a view of making them a feature of the company's product next season. Collector George R. Bidwell, by the way, is an enthusiastic locomobiler and may be seen any day in the park and on the boulevards in his Stanhope.

Mr. Klingman was in fine humor over the company's affairs when The Motor Age man saw him today. "We are getting out about fifteen vehicle a day at the factory that that should relieve the pressure on us a little. I received a letter from a locomotive engineer the other day, who had been running a friend's loco. By his expert handling he said he had gone forty miles on a gallon of gasoline and seventeen gallons of water."

MOTOR RACING AND MOTOR PACING

WINTON'S HARD LUCK

Cleveland, July 16.—Mr. Charles B. Shanks, advertising manager for the Winton Motor Carriage Co., who was with Mr. Winton on his trip abroad, returned from Paris a few days ago. Mr. Winton remained in Europe and will spend several weeks at his old home in Scotland, returning to Cleveland about August 15.

Mr. Shanks adds some interesting details to the story of the international race in which Mr. Winton failed to finish. He maintains that had it not been for accidents the American representative would have made a showing that would have done credit to the industry in this country. Speaking of the race to-day he said:

"The unfortunate accidents which happened to Mr. Winton's machine were wholly responsible for the fact that he did not make a better showing in the race. The course covered 346 miles and it was much too long to show the relative merits of any machine as far as speed is concerned. All of the automobile owners said after the race that the course was too long for a fair speed trial. The start was made about ten miles out of Paris and extended to Lyons. Three machines started ahead of Mr. Winton and for the first ten miles there was considerable jockeying among them. Mr. Winton had passed the Belgian, the German, and one of the Frenchmen, and was rapidly overhauling the two Frenchmen who were in the lead, when a sharp corner was reached. A heavy rain on the previous day had made the road very slippery. Mr. Winton did not know this, or thought he could make the corner without trouble, and instead of slowing down to twenty-five miles an hour, as the others did, he kept up a speed of between thirty-five and forty miles an hour. As a result the machine ran into a heavy embankment. The steering head of the left front wheel was badly bent, so much so that the wheel was twisted to an angle

of forty-five degrees. The tire on the rear wheel was loosened so that it had to be strapped on. About twenty miles over the hard roads cut the strap so that the wheel was on the rim. For some time Mr. Winton continued at a pace of thirty-five miles an hour, but under the circumstances it was out of the question to win, and the race was abandoned. The motor of the machine showed up splendidly. It was wholly uninjured and showed that it is capable of producing a high rate of speed."

Mr. Shanks stated that the single cylinder type of motor used on the Winton carriage created a very favorable impression and the vehicle was favorably commented on as a fine piece of mechanism. At first the Frenchmen were inclined to be skeptical, but after they had seen the carriage under full speed they changed their views.

NELSON'S BIG VICTORY

Boston, July 15.—Johnny Nelson won the two hour a day six days' Golden Wheel race here tonight by over seven miles from his nearest competitor, Burns W. Pierce, the conqueror of Michael. Nelson rode a great race all through the week and was the only rider in the race who did not have an accident to either motor or single wheel or tires. Nelson covered 391 miles 790 yards for the twelve hours' ride. His fastest ride of the two hours was that of the fourth day, when he rode 67 miles and 440 yards. Stinson, the long legged Boston youth who has been termed "Hard Luck" Stinson on account of the many disasters that have accompanied his riding, was one of the features of the race, and despite the fact that he went wrong the first day, broke something like four wheels, punctured half a dozen pairs of tires and obtained over a dozen cruel falls, was in it at the end of the race with only eight yards separating him from Nelson for first

money for the night's riding. His last night was certainly the best of the race. At the crack of the pistol Stinson, paced by Gately and Dudley Marks, set out to make a killing, and he did so well that, at ten miles, he had the field looking like selling platers and was two laps to the good of Nelson. Just at this point of the game Stinson's tire blew up and he sustained a nasty fall and a wrecked wheel, the fourth smashed wheel and the twelfth fall of the week. Nothing daunted, the plucky Boston lad remounted on a new wheel and started after the flying trio, which was headed by Nelson. It was a long and stern chase for eleven miles, when Stinson made up a lap. From here on to fifty-seven miles he was still hard at work to gain back that other lap and did so, leading at sixty miles, when Nelson went up, and, in two miles, had caught and passed him. At sixty-three miles Nelson led Stinson by half a lap, which Stinson in the next two miles pulled down and at the finish they were barely eight yards apart.

The race was interesting from a motor point of view, for the motors worked on the whole fairly well. The four men, Miller, Stinson, Pierce and Nelson, had all told just twelve motors and Charles River track looked like a motor factory. There were several peculiar accidents. On the first night the cap on the top of the carburetor of Dudley Marks' motor came off, admitting too much air at a critical moment. Dudley was equal to the emergency and stopped up the opening with his hand, but what with the constant jolting out of the liquid and the quick evaporation of the gasoline he nearly froze his hand before being relieved.

Another point that this race has strongly brought out is, what are the proper kinds of tires to use for the motor tandem?

Do they have to be made as light and lively as the racing tire on a single wheel? This race has proved that they do not. A tire more or less dead holds the turns better. The race was marked by the giving way of several front forks and frames through the crystallization of

the tubing, brought on, no doubt, by the constant and rapid vibration.

The score by two-hour stages proves by its totals the wonderful improvement in point of speed made by the use of motor pace. It is as follows:

First Two Hours

	Miles.	Yards.
Nelson ..	66	72
Pierce ..	63	1,540
Miller ..	60	1,469
Stinson ..	57	661

Second Two Hours

	Miles.	Yards.
Nelson ..	132	1,247
Pierce ..	128	1,459
Stinson ..	123	1,442
Miller ..	122	1,122

Third Two Hours

	Miles.	Yards.
Nelson ..	197	157
Pierce ..	192	1,355
Stinson ..	186	299
Miller ..	179	1,576

Fourth Two Hours

	Miles.	Yards.
Nelson ..	264	612
Pierce ..	259	1,087
Stinson ..	250	717
Miller ..	244	1,188

Fifth Two Hours

	Miles.	Yards.
Nelson ..	326	575
Pierce ..	320	300
Stinson ..	311	1,374
Miller ..	299	1,556

Final Score, Twelve Hours

	Miles.	Yards.
Nelson ..	391	790
Pierce ..	384	109
Stinson ..	376	1,579
Miller ..	358	186

Nelson, Stinson and Pierce rode 116 gears, while Miller's mount was geared to 130. All men rode Orient wheels except Nelson, who rode a wheel made by himself and brother in Chicago.

Nelson, Stinson and Archie McEachren were matched here tonight to ride a twenty-five-mile motor paced race for a purse of \$700 on Saturday evening, July 21. The terms of the race are \$400 to winner, \$200 to second and \$100 to third.

Charlie Miller, dissatisfied with the working of his two motor tandems, visited the Orient factory this week and ordered a tandem built after his own de-

sign. The machine will have a $3\frac{1}{2}$ water jacketed Astor motor and bids fair to be fast.

RACING IN FRANCE AND ITALY

Paris, July 4.—Last Sunday was the day and Salon the scene of a spirited racing over a 100-kilometer course, under the auspices and management of the Automobile Club of Salon. Fast time was expected and was made.

In the voiturette class, Marcellin was the favorite, and would undoubtedly have won if he had not been the victim of one of the breakdowns seemingly inevitable in every race, when he was going at a speed of seventy kilometers an hour. The prize for this class was won by Camus in 1:58:03 1-5, with Hachel second, three quarters of an hour behind. Camus' speed of fifty-one kilometers (31.69 miles) to the hour is remarkable, when it is considered that his voiturette weighed only 320 kilograms (704 pounds), and was provided with but a single cylinder motor, with air-cooled cylinder and water-cooled head—no pump being used to aid the circulation of the water. The cylinder was eighty millimeters (3.15 inches) in diameter and the same in stroke. The performance of this motor is considered marvelous. Marcellin's vehicle had a double-cylinder motor.

Jenatzky won in the class for heavy vehicles and established a new record for the course. He used the vehicle in which he intended to race for the Gordon-Bennett cup, but which arrived at Paris too late for that event. This is the first long race in which he has used it, although he has shown a speed of ninety-two kilometers ($56\frac{1}{2}$ miles) to the hour over short distances. His time was 1:20:15 1-5. Cuchelet was second in 1:33:15 4-5, and Vagliano third in 1:39:15 3-5.

In the motor-tricycle class, Vitalis won in 1:41:28 3-5, with De Sylvabelle second in 1:44:18 3-5, and Donjon third in 1:59:16 3-5.

On the day after the races Bonnard

made an attempt to break the 100-kilometer motor bicycle record held by Bucquete, and succeeded in doing it by four minutes. His times were:

25 kilometers	29:30
50 kilometers	1:03:00
100 kilometers	2:13:19

From Italy comes the news of an exhibition at Padone, under the auspices of the Automobile Club of Italy, in connection with which races were given on June 30 and July 2. All the Italian manufacturers were represented among the exhibitors, as well as many of the more prominent French ones. There were on exhibition eleven motor bicycles, twenty tricycles, eleven quadricycles, twenty-three voiturettes, and thirty-two heavy vehicles with accommodations for two to four passengers. The attendance of foreigners was large and a considerable number of orders are reported to have been taken.

Gaste, who won in the tricycle class over the 200-kilometer course in 4:52:45, was the only Frenchman to secure a place, the others all being won by the Italians. In the voiturette class, Padovani won in 5:13:31; in the class for two-passenger vehicles, Fiat won in 4:39:00, and in the four-passenger class, Colterati in 4:52:10.

On a trotting track were held a series of tests for promptness in starting and stopping and accuracy and promptness in steering and reversing.

A GERMAN ROAD RACE

Berlin, July 2.—Director Ehrhardt of Eisenach won the road race from Nuremberg to Kitzingen and back on June 24. The event was open only to touring-cars and the route about 160 kilometers long and very hilly. All the obstacles, rain the chief among them, were gallantly surmounted by Herr Ehrhardt, who needed 4 hours and 45 minutes, including a stoppage of 45 minutes for repairs. Herr Lugenieur Enders was second man home on a Benz car.

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THROUGH AUSTRALIA BY MOTOR

ACCOUNT OF A 500-MILE TRIP IN AN AUSTRALIAN MADE STEAM VEHICLE OVER UNMADE ROADS AND THROUGH THE BUSH

The Thomson steam motor phaeton, which is now being operated by the Thomson Motor Car, Ltd., 305 Flinders Lane, Melbourne, recently successfully performed a journey, unique in the history of Australia, of 500 miles between Bathurst (New South Wales) and Melbourne (Victoria).

The following account of the trip is from the pen of E. L. Holmes, who accompanied H. Thomson, the inventor of the vehicle, and will give a fair idea of the "roads" that had to be covered and the difficulties that were overcome in the accomplishment of their undertaking:

Delayed at the Start

After being delayed at Bathurst for two days, during which two inches of rain fell in fifteen hours, we made a start at about 10 a. m. on Monday, April 30, on our long journey. The head wind blew piercingly cold, and we found after leaving the town the havoc wrought by the downpour. All the binding was washed out of the road, leaving rough metal, and, as we began the ascent of the mountains that surround Bathurst, we made very slow time. Twelve miles out two creeks had to be crossed—no bridges—the rain having banked up heavy sand, making them extremely dangerous. The car, however, was gently lowered into the bed, and both Thomson and I had to exert ourselves to no small extent to extricate it. On leaving the creek we encountered a curly hill, about 150 yards long and quite one in six, with water-worn ruts running in all directions. Notwithstanding the beautiful manner in which the motor had been climbing, this hill with its awfully rough surface stopped the car several times. We eventually surmounted it, and, after a few miles of downs, reached the foot of "Fitzgerald's Mount."

"Two miles long and too steep to ride down," so said the Cyclists' Guide Book,

but we quickly changed our sprockets, reducing the gear about one-fifth, and climbed it splendidly, notwithstanding the rough metal road. We reached the top at last and almost immediately entered upon one of the famous New South Wales red clay patches. The tires began to increase in size with every revolution, but even the worst of roads have an ending, and right glad were we when we commenced a steady descent on Blayney, which we reached at 6:15 p. m., downhearted with the extraordinary rough surface of the road, and having climbed up 500 feet or more. Only twenty-four miles were covered in 4 hours 25 minutes, and had we not received favorable reports of our future road, it is more than likely that the trip would have been abandoned. However, a good tea and comfortable bed made us eager for more.

White with Frost

The sight that greeted our eyes when we awoke was both pleasant and otherwise, everything being white with frost, even the car in places. Leaving Blayney at 9:30 a. m., freezing cold, we proceeded to climb about 1½ miles on good quartz road. Progress was slow and steady, the demand on the generator being very heavy indeed. Once this grade was surmounted, we entered upon good, undulating country till on the outskirts of Carcoar, when the road began dipping to a great angle (about one in ten). Not only was the grade so steep, but we had to negotiate three right angles. Like many country townships, Carcoar is built in a hollow, and a very steep hill had to be ascended out of it; so, having said "Good-bye" at 11 a. m., we continued our journey. We were soon in good undulating country, firm gravel roads, and good time was made till we reached Mandurama at 11:35. Usual sleepy country township—no one to be seen till we pulled up—with hotel, black-

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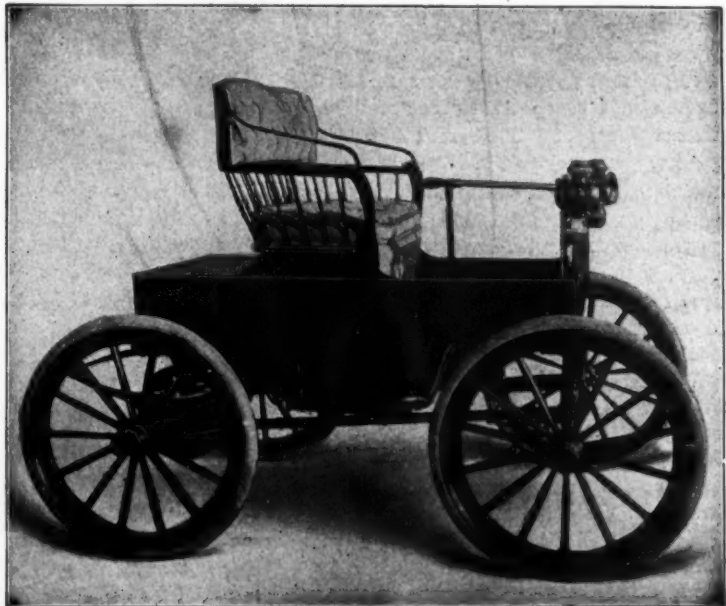
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smith and store, so, having replenished our water tanks, we left at 11:45 a. m.

Fording a River

We made an early lunch at Lyndhurst (as the next stopping place was too far), the roads being better than on our first day's ride, yet they were not good by any means. From here the roads begin to be rough and heavy for about six miles, and we met with the first serious obstacle of our journey, viz., "Limestone Creek," the bridges having been washed away with the flood water. About one chain from the broken bridge the old ford used to run, so after lengthy examination and consultation we decided to take it. Being too dangerous to take at any speed, and two road repairers having arrived during our examination, we lowered the car gently down some one in ten grade into the creek, which the car with a short, sharp spurt cleared, sticking firmly in the banked-up sand and clay on the opposite bank, from which Thomson and I with the assistance of the two men finally extricated it.

A Red Mud Bog

We then entered upon rough up-hill country for about two miles, when we came upon another New South Wales red mud bog. We tried it quietly, but stuck firm half way up to our axles, so tucking up our trousers and getting on a billet of wood, we assisted in the reverse of the motor, and backed onto the dry ground. Seeing that the only way to negotiate the obstacle was by speed, we got well back and set the motor racing. I kept up a running shove up to the edge of the mud and with the momentum of an express engine the motor tore through the mud in great style, splashing everything on board, including Thomson. I now found myself stranded, the road being quite impassable anywhere, but the fence was "high and dry," so I made a bridge of it.

We then had a good run on unmade road for a few miles, clearing three red mud patches in great style. The road then began to improve for four or five miles and we made good time, reaching Cowra at 5:10 p. m., having journeyed the last 25½ miles in two hours fifty minutes, including the obstacles referred to. We decided to rest here for the night,

after a very enjoyable day's ride notwithstanding a head wind, "Limestone Creek" and the red mud bogs.

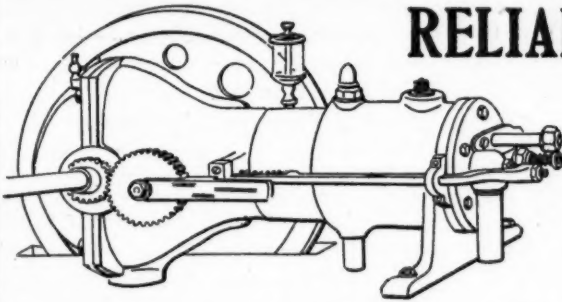
Thermometer Near Zero

We left Cowra at 9:26 a. m. with the thermometer near zero, but the sun soon made the day the loveliest we had so far experienced. Over the Lachlan Bridge out of Cowra we proceeded on roads not laid down in the guide book, which was hardly to be wondered at after all, a considerable portion going through private property, causing us to go through several gates. The road was comparatively level and good for about twenty miles, when we struck some very heavy sandy country with a gradual rise for a mile or more, and the road, such as it was, was about four chains wide and hugged the railway. After twelve miles of heavy bush road, which was very difficult to follow on account of its unmade condition and the numerous tracks formed—the only clue to our route being the mile posts—we had the bad luck to lose our "road." After proceeding for about half a mile through fairly open bush, we stopped and had a consultation, finally agreeing to strike to our left, eventually bringing up to one of our "white friends" (a mile post).

An Exciting Incident

An exciting incident happened whilst cruising about the bush and which, but for the extreme presence of mind shown by Thomson, would have caused a rather serious delay. Coming down a short slope a heavy sand rut caused the steering wheels to swerve, heading the car straight for a large tree, but Thomson like a flash struck the lever back, making the car lift out of the rut, and we cleared the tree by a hair. Sand now became the order of the day with small patches of good road, gravel and red clay. In one of the softer bogs the car stuck, the driving wheels revolving in the mud. There was no help but to assist it out, which we did without any great difficulty. We kept on these "flats" roads till about six miles from Young, where we commenced to rise.

These rises were particularly rough and on one of them we met with our first accident, which, although of a minor nature, delayed us about an hour and a half al-



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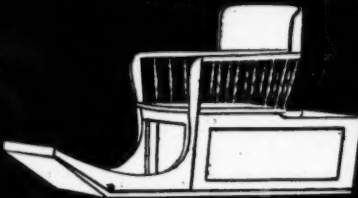
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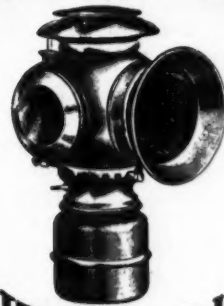
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together. A clip which connects the back axle with the chain adjusting strut fractured and the right-hand chain loosened, but a piece of wood tied firmly proved ample to keep the chain from loosening. However, our time to Young was very slow. We eventually arrived there at 4:20 p. m., having accomplished 113½ miles of our journey.

A Good Run

The next morning—the new chain strut having been fitted the night before—we recommenced our long though not wearisome journey, immediately entering upon rapidly rising ground, which we covered splendidly. Up and down country to Wombat—eight miles from Young—just before entering the town, whilst running down a good incline at about twenty miles an hour, we struck a rather deep gutter, bouncing the entire vehicle off the ground fully six inches. The road still continued rough, sandy and hilly, but the going was fair, and we made Wallendbeen for lunch at 12:30 a. m.

A Race with "Hay Motors"

After about four miles of fair road, we entered upon a stretch of splendid quartz gravel roads. The last twelve miles we reeled off in 1:05, a considerable portion of which we had matched against us a pair of iron grey "hay motors," but we gave them our "heels" or I should say "steam" and beat them badly into Cootamundra, arriving at 2:45, having now put 145¼ miles behind us. After filling our water tanks, we left at 3:20 for Bethungra—fifteen miles out. This road, after about a mile, became wretched, winding in and out amongst the ranges and being full of gutters from side to side, preventing any decent speed. In fact, it was necessary to go down some grades slower than we ascended them to prevent accident. The midges were thick in places, and very annoying. It was necessary once to pull up and extract one from Thomson's eye. However, even the "worst road in the district," as it is said to be, has an ending and we arrived at Bethungra at about 5:25 p. m., having negotiated the worst fifteen miles we had struck since the first day, in two hours and five minutes.

Bethungra is the usual country village

and we determined to make an early start, so ordered breakfast at 7:30, but it was not till 8:20 that we got away. It was an awful town to leave, as three or four roads junction out, and it was by the merest luck that we struck the right one. We commenced again on bush tracks, but had proceeded but a short distance when a slight accident befell the car. A wheel struck a branch of a fallen tree which sprang up and knocked the drain tap off our water tank, losing about three gallons. A cork soon settled matters, and after a delay of twenty minutes we proceeded, relying on our reserve supply, which proved ample.

(To be Continued.)

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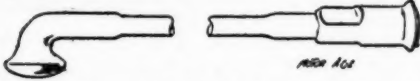
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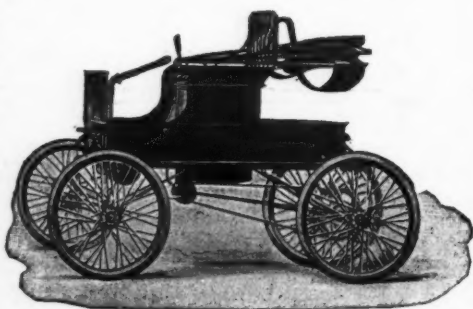
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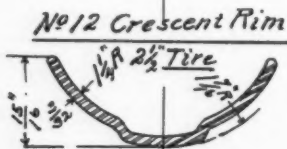
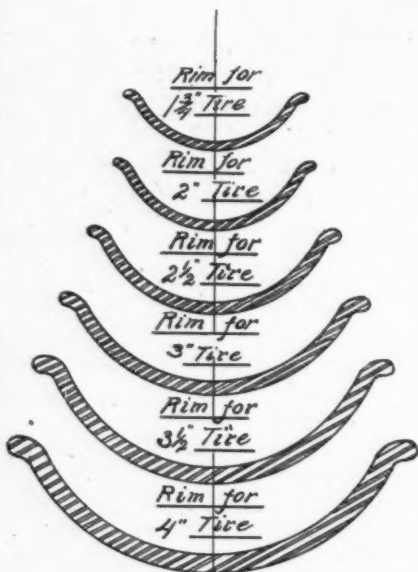
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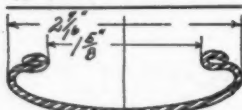
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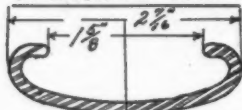


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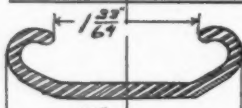
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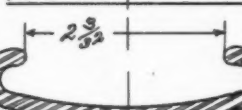
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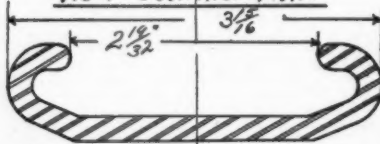
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